# Orange Board of Education
# Three Year Technology Plan

# 2022 - 2025



Orange Public Schools
*Good to Great*

Gerald Fitzhugh, II, Ed.D.
Superintendent of Schools

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Jahmel Drakeford, *CTE & Physical Education (K-8)*

# Three-Year Local School District Technology Plan
# 2022 through 2025

County: **Essex**

District: **Orange**

Grade Levels**: PreK - 12**

County Code: **13**

District Code: **3880**

Website: www.orange.k12.nj.us

Date Technology Plan approved by School Board: December 13, 2022

Is District compliant with Children's Internet Protection Act (CIPA): Yes

Please indicate below person(s) to contact for questions regarding this Technology Plan:

Name: Jason Cordes

Title: Manager of Information Technology

Email: CordesJa@orange.k12.nj.us

Phone: (973) 677-4000 x50213

Signature

# Superintendent Approval

Superintendent: Gerald Fitzhugh, II, Ed.D.

Email: FitzhuGe@orange.k12.nj.us

Phone: (973) 677-4000 x50850

Signature

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## Technology Plan Stakeholder Committee

| Title | Name | Signature |
|---|---|---|
| Superintendent/Curriculum | Gerald Fitzhugh, II, Ed.D. | |
| Business Administrator | James E. Ballard | |
| IT Manager | Jason Cordes | |
| Network Administrator | Christopher Araujo | |
| Database Administrator | Lisa Spottswood-Brown | |
| School Principal | Devonii Reid, Ed.D. | |
| Educational Technology | Faith Alcantara | |
| Teacher | Tera Phipps | |
| Teacher-Special Educator | Sharronda Tanner | |

**NJDOE Vision Statement**

All students will be prepared to meet the challenge of a dynamic global society in which they participate, contribute, achieve, and flourish through universal access to people, information, and idea. In a digital world, students need to learn to use the tools to master the learning skills that are essential to everyday life and workplace productivity. The proficiency is known as ICT (information and communication technologies) literacy, defined by the Program for International Student Assessment as "the interest, attitude and ability of individuals to appropriately use digital technology and communication tools to access, manage, integrate and evaluate information; construct new knowledge; and communicate with others in order to participate effectively in society." This definition goes far beyond a narrow technical competency, which is a relatively low-level skill, to include higher-level skills, critical thinking, and intelligent, creative and ethical use of technology. - A Policymakers' Guide to 21st Century Skills (p.11).

## Orange Public School's Vision Statement

Technology is the gateway to the future, and when executed properly is seamless in its infusion. In order to effectively address the rapid changes in technology and education today the Orange Board of Education must remain abreast of all technology related issues. The Orange Board of Education is committed to preparing today's students for life in the 21st century and beyond. In addition to technology, computer, and engineering course offerings, Orange Public Schools provides students, staff, and the community with opportunities that build a learning community, using technology as a learning resource and management tool. This technology enriched learning community affords students, staff, and families with the commitment to learning, collaboration, and a focus on equitable results.

**Mission Statement**

The Orange Public Schools will incorporate technology into all areas of the educational process by the infusion of a strengthened curriculum that acquires, applies, and evaluates its technology resources to best support the New Jersey Student Learning Standards. This endeavor will develop a community of life-long learners that will enable students to:

- Expand their knowledge base.
- Increase creativity
- Become more innovative
- Participate in technology troubleshooting
- Become self-directed learners
- Reinforce content area literacy
- Improve critical thinking, problem solving, and decision-making skills
- Collaborate with others to effectively complete a task
- Explore various professions involving technology
- Use assistive technology to augment the learning process
- Access, analyze, evaluate, and communicate information
- Use video to enhance their learning experiences
- Use technology to improve student achievement.

# Technology Overview

## A. Technology

- **Equipment and Network Capacity:**
    - The district's technology network and infrastructure is a comprehensive system that allows for the users to adequately access all areas of technology, including but not limited to telecommunications, the Internet, educational software and various database management systems.
    - Most elementary schools have a minimum of one student workstation lab with at least 20-27 stations. As each lab's devices age out, additional devices are purchased.
    - Each classroom has a teacher station for using the mounted interactive boards. Additionally, schools have multiple carts of Chromebooks. All district schools are now part of a wireless environment that enhances the ability of teachers throughout the district to take attendance, maintain grade books, and perform mark reporting tasks within the district Student Information System (SIS).
    - All administrators have access to technology in their workplace via desktops and have portable devices with wireless connectivity.
    - The district accomplished one to one initiative to ensure access and usability for students at all 15 school locations.

- **Software and Filtering:**
    - The district's network and infrastructure is proficient to provide adequate access to the entire school community. The district's present focus is to continue to build upon the peripherals and software that is used with the current infrastructure. By providing a strong staff development program that infuses technology into the learning process and models effective use of technology within the curriculum, the district will achieve a stronger educational technology presence that encourages technology integration in all content area
    - The district has moved towards software that is web-based which provides less maintenance and use of server space and allows content to remain current. The following sites are utilized for blended and personalized learning: Discovery, Acadience Learning.com, iReady, Illustrative Mathematics, ALEKS, BrainPop, NWEA, HMH Spring Board, Mango Languages, the DBQ Online Project, Britannica Launch-packs, and World Book Interactive.
    - The option of video on demand can enhance the curriculum by affording the teachers the opportunity to include various examples of video within their instruction. ;k;available in the Frontline Platform.
    - Go-Guardian, Cisco Umbrella SIG, Cisco Fire Power Firewall, and Crowdstrike End Point Protection Suite are the tools used to secure our network infrastructure.

- **Technology Maintenance Policy and Plan:**
    - With the growing infrastructure, the need to keep an expansive and cohesive infrastructure is mandatory. To help manage the process of dealing with maintenance, the district implemented SolarWinds Service Desk. A web service tracking system that reflects the help desk model and allows all technology staff to stay abreast of the technical needs of the district. All teachers, faculty members, and administrators have the ability to contact the Technology Department directly by submitting an electronic support ticket that is assigned to the district technology support staff directly.

o This web-based software allows the IT Manager to assign all issues to Technology Coordinators and district System Engineers. The Service Desk system generates work order tickets to the assigned individual and progress on the ticket can easily be tracked and monitored. The tickets can be retrieved by district System Engineers at any location within the district and via district assigned smartphone application or browser. Monthly meetings are held amongst the technical staff to stay abreast of issues and best practices in technology advancements. The aforementioned software provides reports and statistics to help better prepare the district for the upcoming year's budget.

- **Facilities Infrastructure:**

Wireless Infrastructure
  o As the district grows, so has the need to support advanced wireless functionality with increased bandwidth speeds and the latest wireless standards. In School year 2020-2021 using Federal funding, the District was able to upgrade its wireless infrastructure to the latest access points to be able to support all the new wireless standards using the Cisco Meraki Platform. Each district classroom and office space received a new Cisco Meraki wireless access point with increased functionality. The goal of this tech plan is to maintain the integrity of this system and stay abreast of maintenance and security updates.

Building Maintenance System
  o Historically the district has been challenged with proactively monitoring building maintenance systems such as Boilers, Central Air conditioning units and etc. We are now working with Trane Technologies to install the comprehensive solution "Tracer Synchrony" to proactively monitor Building Facility components.

Security Surveillance System
  Using Federal funding, the district is now installing a comprehensive security surveillance system by Cisco Meraki. This project will address all security points, internal and external with a new high-end surveillance camera system using the same platform to manage the district's wireless infrastructure. In addition to basic surveillance monitoring, this system will allow security personnel and building administrators to remotely monitor their facilities as well as other advanced features.

Cellular Repeater Service
  o Because of the foundation of district buildings, it is very difficult for staff and students to receive a cellular signal to their personal cell phone devices. As a security concern, we currently have a project in place to install cellular repeater infrastructure that will increase the Cellular signal in each building.

LENS Security Notification System Installation
  o As school violent incidents has increased across the nation, School districts are in need of an emergency alerting system that automates alerting authorities, district personnel, and students of security incidents in real-time. As a security initiative to become compliant with Alyssa's Law, the district is working with Eastern

Datacom to install the LENS Security Lockdown and Notification System. This system has a suite of features that include emergency broadcast notifications over the existing PA system, automates notification to authorities and district stakeholders of security incidents in each school building and offers trigger points in the form of panic button and visual strobe lights to alert individuals outside of security threats inside each district building. Plans to integrate district building entry and exit points are to follow for emergency lockdown procedures.

InformaCast Fusion
- o InformaCast Fusion is a hybrid-cloud-based mass notification system that reaches people via on-premises and mobile devices. Reach people on every channel. Send notifications to IP phones, IP speakers, desktop computers, digital signage, mobile devices, and more so no one misses a message. In addition to above LENS platform this Service extends emergency notification to district devices to ensure all stakeholders are informed of security incidents.

Uniflow Printing Infrastructure
- o Uniflow is a software-based printing solution for small and medium sized businesses designed to manage entire print environments. The solution aims to reduce overall printing costs and increase security by integrating our windows environment and user directory into the districts Canon copier fleet. This system will establish print quotas for Students and Faculty. In addition to managing and encouraging responsible printing it will allow the Orange board of Education to monitor Print expenditures. All Canon copiers have card readers that will enable stakeholders to access and perform print copy and scan functions use existing ID cards associated with the district user.

Cisco IP phones
- o User Federal funding for School year 2021-2022 the Orange Board of Education was able to facilitate installing a phone in each classroom and office space in each school building. This accessibility provides an alternative means for receiving information from parents and guardians. The communication between homes and schools has been strengthened. The goal of this tech plan is to maintain the integrity of this system and stay abreast of maintenance and security updates.

Network Equipment Refresh
- o Switches are the core of a network infrastructure. It is what allows all devices such as Printers, Desktops, Security Cameras Phones and Wireless access points to connect to the internet. As network equipment is approaching end of the life cycle with the manufacturers it now time to start replacing network switches. Leveraging Federal Erate funding, the Orange Board of Education will begin replacing network equipment at a 15% cost to the Orange Public School District. Project is set to begin in the School year 2022-20223 with Orange High School and Orange Preparatory Academy of Inquiry and Innovation and with the

Elementary Schools to follow in the next few years.

Promethean Interactive Smart Boards

In preparation of 21st century learning, aligned with the Orange Public Schools Strategic Plan for school years 2021-2026, we are now planning to replace old smart board technology with Interactive Promethean displays in each classroom. Using federal funding, the Orange Board of Education was able to replace up to 65% of the smart board technology in the classrooms district-wide. This project will continue under this tech plan until all the old smart boards are removed and replaced with new interactive Promethean Boards.

**Telecommunications:**
  - As the district acquires more web services for training materials and also has instituted a one-to-one device model for students, this has created the need to increase the bandwidth speed between each building as well as upgrade the internet bandwidth to accommodate all the new learning resources.

  - In accordance with Industry standards, when utilization of Internet and network circuit connections between buildings meet thresholds of 50% percent or above its recommended to increase the bandwidth.

  - Using Federal Erate funding with a 15-20% cost to district we will be looking to Increase internal district speeds from 1Gbps to 10Gbps and Internet Speed from 3 1Gbps speeds to two 5Gbps.

**• Technical support:**
  - The district is currently utilizing over 10,000 computers, laptops, and Chromebooks. At present, the district has two systems engineers, one network administrator, one information technology manager, one database manager who are full-time employees of the Board of Education. Additional support comes from outsourcing to help maximize the maintenance efficiency.

**• Replacement Plan:**
  - The Orange Board of Education adopts the concept that all computers are obsolete after five years and thus moves to replace all such computers. Using recycling vendors' services, the Orange Board of Education will recycle and replace all computers over five years old. All desktops and laptops for administrators will then be re-stocked and reconfigured. All labs are currently running a Windows 10 and/or Mac OS latest Operating system.

  - All computer peripherals and accessories are replaced as needed.

  - Servers for the district are currently running volume licenses for Microsoft Windows 2016. As the Server infrastructure is vastly approaching End of product life Cycle and end of support. We are currently evaluation a server refresh for each district building.

Our server platform allows the system engineers to push software from the server to workstation rather than perform a manual installation. As well as provide services such as Printing, Network Sharing, User Accounts, Directory of windows devices and many other features. While the Orange Board of Education has adopted a life cycle of 5 years for Computing devices such as desktops and laptops. Due to the nature and the services used by server infrastructure this life cycle is extended to 7 years. After the Seven-year life cycle or Manufacturer End of Support, the Orange Board Education will seek to refresh Server equipment.

- **Assistive Technology and Accessibility:**
  - o It is important that all stakeholders be able to access and use the technology available to them. All special needs students have Individual Education Plans (IEPs) that describe the particular needs of each child. Currently the following assistive technologies have been put into place as per the child's IEP:
    - Phonic Ear Buds
    - Augmented Communication Device
    - Text to Speech and Speech to Text software
    - Several schools have an account with RFB&D (Reading for the Blind and Disabled), providing books on tape and or CD
    - iPads
  - o In accordance with Federal Access Laws, the Orange Board of Education utilizes Schoolwires, an ASP web hosting service. Pages can be found at www.orange.k12.nj.us

# Three-Year Technology Plan
# Inventory Table

| Area of Need | Describe for 2022-23 | Describe for 2023-24 | Describe for 2024-25 |
|---|---|---|---|
| Technology Equipment | Interactive Panels, Chromebooks Replace obsolete equipment | Interactive Panels, Chromebooks Replace obsolete equipment | Interactive Panels, Chromebooks Replace obsolete equipment |
| Networking Capacity | 2GB Ethernet, 1GB TLS | 10 GB Ethernet, 10GB TLS | 10 GB Ethernet, 10GB TLS |
| Software used for curricular support and filtering | CrowdStrike Barracuda Cisco Umbrella SIG Go Guardian | CrowdStrike Barracuda Cisco Umbrella SIG Go Guardian | CrowdStrike Barracuda Cisco Umbrella SIG Go Guardian |
| Technology maintenance policy and plans | Consultants | Consultants | Consultants |
| Telecommunications Services | Xtel Communications, Verizon Internet and EVPL Services | Xtel Communications, Verizon Internet and EVPL Services | Xtel Communications, Verizon Internet and EVPL Services |
| Technical Support | SolarWinds Service Desk Helpdesk system | SolarWinds Service Desk Helpdesk System | SolarWinds Service Desk Helpdesk system |
| Facilities – infrastructure including central telephone & security systems | Informacast Fusion Eastern Datacomm LENS Meraki Surveillance Tracer Synchrony(BMS) | Informacast Fusion Eastern Datacomm LENS Meraki Surveillance Tracer Synchrony (BMS) | Informacast Fusion Eastern Datacomm LENS Meraki Surveillance Tracer Synchrony(BMS) |
| Other Services: | PD Vendors | PD Vendors | PD Vendors |

**Cyber Safety**

To provide the district with a safeguard against inappropriate access, use, and intrusion, we have followed a layered model approach that involves a solution at various levels of the district infrastructure to ensure the Cyber safety. At the device level, we have Go Guardian which is an application suite that offers basic filtering and lockdown features for Students Chromebook devices. This system gives access to Teachers to manage classroom filtering in the event there is a need to block content on demand. Meraki Wireless access points in addition to providing wireless network access to student and faculty devices also provides basic website and malicious content filtering at the wireless access point level. As a comprehensive solution to the highest level of URL filtering the district has now put in place Cisco Umbrella SIG. The software is cloud based and has replace former URL Security system as the core URL filter for school year 2022-2023. As Websense offered the same functionality in URL filtering, Cisco Umbrella SIG offers offsite filtering for devices once they leave district school buildings and solution is completely cloud based where district is not subject to system outages hosting services on district internal Servers.

To protect district internal network access from outside threats, as of the school year 2021-2022 the now have upgraded the Cisco ASA firewall to the latest architecture of Cisco Fire Power Firewall. This not only offers the protection as it predecessor but now offers a cloud component for remote management and maintenance routines and modules have been expanded to support increase bandwidth speeds of up to 50Gbps.

The appropriate use of software and other types of technology are outlined in the district's Technology Manual and updated Acceptable Use Policy (AUP) for staff and students. The AUP also discusses the various perils and responsibilities the user must face as well as the consequences for failure to observe the code of conduct regarding cyber bullying.

The Technology Coordinator located in each building is responsible for informing staff and students of the perils of the Internet. Parental resources regarding online safety are available to all parents on the Parent Resource Page of the District website. Orange has implemented a technology curriculum inclusive of a section on cyber safety.

**Needs Assessment**

Technology Coordinators administer and analyze a technology survey and complete a technology inventory annually. This survey and inventory are used to assist in budgeting for next year. The Office of Innovation oversees the instructional component of Technology Coordinator responsibility. The Technology Coordinators received training and provide ongoing training to their staff. Presently we provide technology training to all staff. Technology Coordinators receive additional training above and beyond and turnkey that training.

**Summary**

Several professional development days have been established throughout the school year to address the needs and concerns of staff. The days include sessions in both pedagogy and technical abilities. Classes included but were not limited to:

- Microsoft Office 365
- EasyTech Software
- Web 2.0 tools
- Genesis

- Interactive panels (Interactive White Boards, Promethean boards…)
- Schoolwires
- Discovery
- Flip Grid
- Google Workspace for Education Resources
- Frontline
- Apple Technology
- Clever
- HMH Resources
- Spring Board
- Illustrative Mathematics

Educators are assured access to technology to facilitate technology integration across the curriculum. A hard-wired and wireless environment enhances Internet connectivity. IWB's provide heightened presentation and application of skills.

Students district-wide have daily access to technology to support the use of 21st century skills in their learning environment. The district has implemented an one-to-one environment through the use of Chromebooks.

Technology Coordinators are present in every building to assist teachers in the infusion of software, hardware, and online subscriptions throughout the New Jersey Student Learning Standards (NJSLS). System Engineers and the Network Administrator are routinely assigned to service maintenance/repair requests as they appear.

# Goals and Objectives for
# 2023-2025

The integration of technology into the curriculum offers the potential to augment student's learning experience by providing an instructional tool for delivering subject matter in the curriculum. The district's responsibility to prepare students to access, analyze, apply, and communicate information effectively can be achieved by modeling and encouraging the integration of technology that is aligned with the NJ Student Learning Standards and best practices that support differentiated learning, integration across the curriculum, and self-directed learning.

**Goal 1**: All students will acquire 21$^{st}$ century technology skills necessary to be productive members in the community, workplace, and society at large.

> *Objective 1*: Technology integration practices and strategies will be used in the teaching and learning process. Technology Coordinators will be used to move teachers from the use of traditional practices of teaching subject areas towards web 2.0 tools and resources.

> *Objective 2*: Reevaluate the technology development and implementation of a district-wide curriculum that emphasizes the curriculum's correlation to the NJSLS and NJSLA assessments.

> *Objective 3*: Students will be exposed to cross-platform environments and devices in order to continue to excel in the community, workplace, and in a global society.

> *Objective 4*: Increase the number of Computer Science and STEM courses in K-12.

**Goal 2**: All stakeholders in students' welfare, including educators and administrators, will increase their knowledge and level of 21$^{st}$ century skills in order to effectively integrate educational technology across curricula that will enable students to achieve the goals of the NJSLS and NJSLA and attain success in a global society.

*Objective 1*: All educators, including administrators, will participate in ongoing, sustained, high- quality professional development activities focused on infusing 21st century skills into curricula and instructional practices.

*Objective 2*: All school administrators will model the 21st century skills necessary to provide effective and informed leadership that supports the infusion of educational technology and encourages learning beyond the school walls.

*Objective 3*: All supervision and evaluation practices will address the effective use of educational technology for student achievement of the NJSLS and NJSLA and success in a global society.

*Objective 4*: All educators, including administrators, will use e-mail and other interactive tools including Schoolwires, Naviance, Global Connect, the SIS [Genesis] and its Parent Portal to communicate with parents/legally designated caregivers, students, and other educators electronically.

**Goal 3**: All students, educators, and administrators will be able to access and utilize educational technology resources for instructional and administrative purposes throughout classrooms, library media centers, and educational venues such as community centers and libraries.

*Objective 1*: The student population will benefit from the accessibility of technology provided by maintenance of district-wide wireless access and the continuance of the district replacement plan for computers that are 5 years or older.

*Objective 2*: Voice Over IP telephony will be expanded to include video conferencing, beginning with administration located at administrative building.

**Goal 4**: The maintenance of the district infrastructure will be robust in its accessibility and provide the necessary safety and security for all students and administrators to acquire digital information and communicate virtually without risk.

*Objective 1*: District-wide web-based video conferencing will be implemented.

*Objective 2*: School district will continue to conduct an analysis of infrastructure and use the results to budget for effective implementation of industry standard networking that supports 21st century educational technology system.

# Three-Year Technology Implementation Activity Table

| District Goal and Objective | Strategy/Activity | Timeline | Person Responsible | Documentation |
|---|---|---|---|---|
| 1.1 | Technology Coordinators will turnkey, mentor, and model tech integration across curricula | 7/2022-6/2025 | Superintendent, Technology Supervisor | PD hours |
| 1.2 | Implement Scholastic digital curricula i.e., HMH, Illustrative Math, and Mango Languages | Ongoing | Superintendent/Technology Supervisor, Cross-curricula staff | Scholastic data pull, NJSLS, NJGPA and NJSLA guidelines |
| 1.3 | Assembled team including IT Department and Tech Coordinators that will configure and deploy devices in cross-platform environment | 7/2022-6/2025 | IT Manager, Network Administrator, Systems Engineers, Tech Coordinators | Casper Suite device management system' Google Chrome management |
| 2.2 | Lesson plans and activities that support technology integration | 7/2022-6/2025 | Superintendent / Administrator, Technology Supervisor, Cross-curricula staff | PD hours, Teacher evaluation/observation (Teachscape-Domains 1 and 2) |
| 2.3 | Assignment of access to SIS, Parent Portal, Global Connect, Schoolwires, Naviance, email | 7/2022-6/2025 | School Administrator, Database Mngr., Asst. Database Mgr., IT Mngr. | SIS, Naviance, Global Connect generated reports, login logs |
| 3.1 | Provide wireless network maintenance/management system; maintain district replacement plan. | 7/2022-6/2025 | Business Admn., IT Mngr., Network Administrator | Purchase Orders, Inventory, NCS wireless management system |
| 3.2 | Install and manage VoIP conferencing equipment | 7/2022-6/2025 | Business Admn., IT Department | Purchase Orders, Inventory |
| 4.1 | Coordinate with NJGPA/NJSLS/NJSLA and personalized learning platforms | 1/2023 and Ongoing | IT Department; Curriculum Dept | NJSLS/NJSLA, Personalized learning platforms |

## Funding Plan

The Three-Year Technology Plan for the Township of Orange has a creation date of July 1, 2019. The Township of Orange is a district that supports spending and decision making at the building level. Each school creates a technology budget that supports its school's needs. Installation, maintenance, and district wide purchases are implemented at the district level. Schools are responsible for working in collaboration with district personnel to provide a comprehensive building technology model that will show the advancement and vision of technology in the classroom.

| ITEM | DESCRIPTION OF ITEM TO BE PURCHASED | FEDERAL FUNDING | STATE FUNDING | LOCAL FUNDING | MISC. (e.g. Donations, Grants) |
|---|---|---|---|---|---|
| Three-Year Educational Technology Plan Anticipated Funding Table 2022 -2023 | | | | | |
| Digital curricula (see NIMAS) | Scholastic: Edulastic, Agile Minds, Carnegie Learning, PLTW, NWEA, Discovery Education, Acadience, Illustrative Mathematics, Gizmos, ALEKS, iReady, DBQ, World Book, Inner Orbit, Code HS, and Britannica Launch | $221,000 | | $219,380 | |
| Technology Equipment | Kajeets, Chromebooks, Laptops, and Promethean Boards, and tablets/notebooks | $305,000 | | $208,000 | |
| Network | TLS 1000 MB | $331,200 | | $49,680 | |
| Capacity | 1000 Mbps Ethernet | $156,000 | | $23,400 | |
| Filtering | Websense, Barracuda, Symantec, Firewall | | | $70,000 | |
| Software | SolarWinds, NCS, Casper Suite, Cisco Umbrella | | | $75,000 | |
| Maintenance | Consultants | | | $15,000 | |
| Upgrades | Informacast (VoIP) | | | $17,500 | |
| Policy and Plans | | | | | |

| Other services | PD Vendors, School wires, Go Guardian, and Frontline | $112,465 | | $201,600 | |
|---|---|---|---|---|---|
| Further Explanation: | | | | | |

The total cost of ownership is shared between the school and district budgets as well as grant funded resources. The district receives additional funding from federal title grants as well as IDEA which have enabled the district to provide professional development opportunities and equipment to enhance instruction.

E-rate has been a substantial part of funding for the district's technology needs. This reimbursement process provides a discount rate of about 85%. This cost savings allows for the district to spend 15% towards Internet access, infrastructure, and telecommunication needs.

| Three-Year Educational Technology Plan Anticipated Funding Table 2023 – 2024 | | | | | |
|---|---|---|---|---|---|
| **ITEM** | **DESCRIPTION OF ITEM TO BE PURCHASED** | **FEDERAL FUNDING** | **STATE FUNDING** | **LOCAL FUNDING** | **MISC. (e.g. Donations, Grants)** |
| Digital curricula (see NIMAS) | Scholastic: Edulastic, Agile Minds, Carnegie Learning, PLTW, NWEA, Discovery Education, Acadience, Illustrative Mathematics, Gizmos, ALEKS, iReady, DBQ, World Book, Inner Orbit, Code HS and Britannica Launch | $232,050 | | $230,349 | |
| Technology Equipment | Kajeets, Chromebooks, Laptops, and Promethean Boards | $303,866 | | $228,800 | |
| Network | TLS 1000 MB | $331,200 | | $49,680 | |
| Capacity | 10000 Mbps Ethernet | $156,000 | | $23,400 | |
| Filtering | Websense, Barracuda, Symantec, Firewall | | | $70,000 | |
| Software | SolarWinds, NCS, Casper Suite, Cisco Umbrella | | | $75,000 | |
| Maintenance | Consultants | | | $15,000 | |
| Upgrades | Informacast (VoIP) | | | $17,500 | |
| Policy and Plans | | | | | |
| Other services | PD Vendors, School wires, Frontline, and Go Guardian | $118,088 | | $211,680 | |
| Further Explanation: | | | | | |

## Three-Year Educational Technology Plan Anticipated Funding Table
## 2024 – 2025

| ITEM | DESCRIPTION OF ITEM TO BE PURCHASED | FEDERAL FUNDING | STATE FUNDING | LOCAL FUNDING | MISC. (e.g. Donations, Grants) |
|---|---|---|---|---|---|
| Digital curricula (see NIMAS) | Scholastic: Edulastic, Agile Minds, Carnegie Learning, PLTW, NWEA, Discovery Education, Acadience, Illustrative Mathematics, Gizmos, ALEKS, iReady, DBQ, World Book, Inner Orbit, Code HS and Britannica Launch | $243,652 | | $241,866 | |
| Technology Equipment | Kajeets, Chromebooks, Laptops, and Promethean Boards | $329,386 | | $251,680 | |
| Network | TLS 10 Gbs | $400,000 | | $60,680 | |
| Capacity | 10 Gbs Mbps Ethernet | $200,000 | | $30,400 | |
| Filtering | Websense, Barracuda, Symantec, Firewall | | | $70,000 | |
| Software | SolarWinds, NCS, Casper Suite, Cisco Umbrella | | | $75,500 | |
| Maintenance | Consultants | | | $15,000 | |
| Upgrades | Building servers | | | $17,500 | |
| Policy and Plans | | | | | |
| Other services | PD Vendors, School wires, Frontline, and Go Guardian | $123,992 | | $222,264 | |
| Further Explanation: | | | | | |

# Professional Development

In all curriculum areas the implementation of NJSLS and NJSLA/NJGPA are addressed to instill educational programs that support scientifically based researched practices found in all curriculum guides. Despite the magnitude of research on technology's impact on student achievement, as those professional development opportunities are provided to the district, its facilitators must provide information that supports the integration of technology and assesses and implements Technology Literacy Standards in all curricular areas. Additionally, practices should model effective technology infusion.

The staff development activities that will be offered in the district will link to the belief that technology integration is an integral part of successful student achievement. Staff will be offered training that infuses technology into all content areas. The Curriculum Department under the Office of the Superintendent and the Office of Innovation will supervise the instructional responsibilities of Technology Coordinators in order to further develop the mentor- mentee collaborative efforts of educators, school administrators, and the district technology leaders. This pedagogical evolution will become associated with the development and provision of a comprehensive training program that includes technology integration, in-class support, data driven decision making, and mentorship.

Extensive training will also be provided for application instruction and instructional implementation. The training will be provided for the teaching staff and district administrators in the form of in- district workshops and technology enriched conferences. These training opportunities will include hardware training and personalized/blended learning platforms.

Using ISTE's NETS for students, staff and administrators, the curriculum can be revisited to include technology in all content areas to support the goals and objectives of the NJSLS. Additionally, professional development in the technology platform for the teacher and administrator evaluation models will be provided.

By establishing an equitable professional development program district-wide, the district's commitment to technology and student achievement will continue to support the following curriculum and professional development workshops:

- Naviance (grades 6-12)
- Major Clarity (grades 6-12)
- Frontline
- Destiny
- Discovery Education
- World Book Interactive
- Clever
- Adaptive Technology
- Sheltered English Instruction
- Data Analysis
- Genesis
- Microsoft 365
- Personalized Learning Platforms

- Emerging Technologies
- Mango Languages
- Illustrative Mathematics
- HMH Resources
- Waggle
- Reading Plus
- Spring Board Resources

Evaluation Plan

The District Technology Plan will be reviewed annually by a committee designated by the Superintendent of Schools to update, revise, and reflect on the current practices and changes in how technology should be best used in education. Telecommunications services, hardware, software, and other services will improve education by the district's ability to remain current in research, practice, and understanding the needs of the district. Currently the district is completing an assessment of the network's topography in order to provide increased access to the Internet, increased reliability of Voice Over IP telephony, and an increased quality of communications to the school community with an infrastructure that is uniform in hardware and software.

The core of district Technology Coordinators, one assigned to each school meet monthly to review, evaluate, modify, and implement strategies and methodologies that reflect change/innovations in technology opportunities. Their assessments are turn-keyed to the Information Technology Department which additionally uses software to monitor and evaluate equipment usage and deployment in order to adjust to needs of the infrastructure as it changes

# Three-Year Educational Technology Plan
## Professional Development Table

Professional development detail is needed for the first school year of the educational technology plan. The use of this table is optional and is provided as a convenience.

| Educators' Proficiency/ Identified Need | Ongoing, sustained, high-quality professional development planned | Support |
|---|---|---|
| Integration of New Jersey Student Learning Standards and Student Learning Assessment technology requirements | District trainers (Technology Coordinators, content area coaches, and supervisors) will provide job-embedded coaching and mentoring for the NJSLS requirements | Subject area Google sites will provide additional resources for teachers. Teachers and administrators will be able to add lessons and resources as they work to implement the technology requirements for the NJSLS. |
| Frontline (Danielson and NJDOE Administrators Rubrics) | All new hires will be trained in the evaluation models by district employees, using Frontline. | Frontline online professional development (PD) modules will provide additional PD for the evaluation models and for improved delivery of instruction/administration. |
| Discovery | District trainers (Technology Coordinators, content area coaches, and supervisors) will provide continued job-embedded coaching and mentoring for continued implementation of primary document analysis and supplemental materials to address the NJSLS. | Discovery tutorials are available on-line for teachers who need additional training. |
| Mango Languages for ELL teachers | The ESL/Bilingual supervisor will continue to provide training to LEP teachers for this interactive software, in order to improve port-of-entry students' oral language acquisition. | Release time will be provided for teachers who did not receive training previously; this includes supports in ELA and Mathematics |
| Adaptive technology for SE, ELL, and GE | Initial professional development will be provided by Don Johnsons' company for the adaptive technology. Further job-embedded coaching will be provided by the district. | Subject area Google sites will provide additional support. Common Planning Time will be utilized to assess which students need to use the adaptive technology and how it can be utilized in the writing centers of each classroom. |

| | | |
|---|---|---|
| Major Clarity | New guidance counselors, Work-Based Learning (WBL) Coordinator, and CTE teachers will be trained by the district in order to provide middle school career exploration lessons, CTE development and exposure to careers in various pathways and a medium to capture WBL experiences completed. | The guidance team and CTE team meet regularly to assist each other and receive support from their supervisors. |
| My Learning Plan/Frontline training for new teachers | During New Teacher Orientation, Technology Coordinators training for the district's professional development and professional growth plan systems will be provided. | The District provides guidance on Frontline's home page that provides step by step refreshers for users. Secretaries are also provided on-going refreshers to ensure that the requests and plans are submitted in a timely and correct fashion. |
| Naviance | New guidance counselors, grades 6-12 will be trained by the district in order to streamline college applications and for students to increasingly self-monitor their progress and make healthy college and career decisions. | The guidance counselors meet regularly to assist each other in improved utilization of this on-line program. |
| Genesis | During New Teacher Orientation, Technology Coordinators will provide training in the SIS, grade book, and lesson planner. Coaches and supervisors will continue to assist during school year. | During Common Planning Time, teachers can utilize the system's tutorials for further clarification. |

| | | |
|---|---|---|
| NJSLA/NJGPA Prototypes | The district will provide training for NJSLA prototypes during the school year as they become available. Coaches and supervisors will provide job-embedded training for creating assignments in NJSLA/NJGPA format. | During Common Planning Time and department meetings, teachers will review their assignments to revise them to NJSLA/NJGPA format. Technology teachers will incorporate theses new methods in their lesson plans so students will become familiar with them. |
| Network and Device management training | The district will provide network/device management training for bandwidth/operating system upgrades | Consultants: Cisco/DynTek |
| Interactive White Boards (IW) and device training | The district will provide training for implementation of IWB and tablet strategies | Vendors associated with equipment purchase. |

# Educational Technology Plan Evaluation Narrative

| | |
|---|---|
| *a. Telecommunication services, hardware, software, and other services are improving education* | • Increased bandwidth allows for digital curricula transfer at greater speed.<br>• Increased bandwidth allows for wireless connectivity and additional access for NJSLA and ACCESS assessment.<br>• Discovery<br>• NWEA<br>• Mango Languages<br>• PLTW<br>• iReady<br>• HMH Education<br>• Illustrative Mathematics<br>• Spring Board Resources<br>• Nearpod<br>• Pear Deck<br>• Edulastic<br>• Code HS<br>• Agile Minds<br>• Carnegie Learning<br>• Inner Orbit |
| *b. Effective integration of technology is enabling students to meet challenging state academic standards.* | • Student portfolios<br>• NJSLA<br>• ACCESS<br>• NJGPA |

Updates and improvements to all areas of technology will be on a continuous basis due to the evolving advancements in technology and its applications to education and society.

# NJ Department of Education
## District/Nonpublic School/ Charter School
## Three-Year Educational Technology Plan Checklist

**DIRECTIONS:** Place a check ☑ in the unshaded **COMPLETED** column when the **TASK** has been completed.

| TASK | Completed | |
|---|---|---|
| | Req'd by E-Rate | Not req'd E-Rate |
| **DATE:**<br>Provide your educational technology plan's creation date (the date when the technology plan first contained all the required elements in sufficient detail to support the products and services requested on the Form 470). | p.3 | |

**DIRECTIONS:**

- Answers to questions regarding e-rate compliance: Address the numbered items below in a separate District/Nonpublic School/Charter School educational technology plan document.
- Indicate in the *PAGE* # column, the page number where the corresponding information is found.
- For purposes of this document, "educators" are defined as school staff who teach children, including librarians and media specialists.
- Sample table templates are provided (see links embedded in this document) to assist in the development of the educational technology plan. Please use these table templates unless information is already in a digital form.

| | Indicate in the unshaded spaces the page number where the corresponding information is found | |
|---|---|---|
| | **Req'd by E-Rate** | **Not req'd by E-Rate** |
| **TECHNOLOGY INVENTORY:**<br>1.  Describe the technology inventory <u>needed to improve</u> student academic achievement in the 2022-2023 school year that informs the basis for the Form 470. Include in the description the internal connections and basic maintenance *for 12 months of the e-rate funded year*, such as the following areas:<br>    a)  Technology equipment including assistive technologies<br>    b)  Networking capacity<br>    c)  Filtering method<br>    d)  Software used for curricular support and filtering<br>    e)  Technology maintenance and support<br>    f)  Telecommunications equipment and services<br>    g)  Other services<br>**NOTE:** If this plan is intended to be used for three years of E-Rate funding, provide anticipated inventory information for all three years. See Inventory Sample Table. Definitions of items eligible for e-rate discounts: http://www.usac.org/sl/applicants/beforeyoubegin/eligible-services/default.aspx | p. 9 | |
| **NEEDS ASSESSMENT:**<br>2.  Describe the needs assessment process that was used to identify the necessary telecommunication services, hardware, software, and other services to improve education. | p.10 | |

| | Indicate in the unshaded spaces the page number where the corresponding information is found | |
|---|---|---|
| | Req'd by E-Rate | Not req'd by E-Rate |
| **THREE-YEAR GOALS:**<br>**3.** List clear goals for 2022-2025 that address district needs. There must be strong connections between the proposed physical infrastructure (bandwidth, cabling, electrical systems, networks) and goals. Include goals for using telecommunications and technology that support 21$^{st}$ century learning communities. | Pp 15-17 | |
| **THREE-YEAR IMPLEMENTATION AND STRATEGIES TABLE:**<br>I<br><br>4. Describe the realistic implementation strategies to improve education. Include in the description the timeline, person responsible and documentation (or evidence) that will prove the activity occurred. Address only 'a' and 'b' below to meet e-rate requirements. Address all areas below to continue planning for a technology-rich learning environment.<br>    a.  telecommunications,<br>    b.  information technology,<br>    c.  educational technology (including assistive technologies), and<br>    d.  student technology readiness in preparation for online testing in 2022-2025. | Pp 18 | p.14 |
| **PROFESSIONAL DEVELOPMENT STRATEGIES:**<br>5. Professional development strategies should ensure that staff (teachers, school library media personnel and administrators) knows how to effectively use the technologies described in this plan to improve education and will continue to support identified needs through 2025. *Address only 'a' below to meet e-rate requirements. Address all areas below to continue planning for a technology-rich learning environment.*<br><br>Describe the planned professional development strategies by addressing each of the following questions:<br><br>a)  How will ongoing, sustained professional development be provided to all educators, (including administrators) that increases effective use of technology in all learning environments, models 21$^{st}$ century skills, and demonstrate learning experiences through global outreach and collaboration in the classroom or library media center? | p.23-24 | |
| b)  What professional development opportunities, resources and support (online or in person) exist for technical staff? | | p.24 |
| c)  How will professional development be provided to educators on the application of assistive technologies to support educating all students? | | p.25 |
| **EVALUATION PLAN:**<br>6. Describe the evaluation process that enables the progress and effectiveness of goals to be monitored. | Pg 24 & 28 | |
| 7. Describe the process to make mid-course corrections in response to new developments and opportunities as they arise. | p.28 | |
| **FUNDING PLAN July 2022 – June 2025**<br>8. Provide the anticipated costs for (This date is incorrect) by source of funds (federal, state, local and other) and include expenses such as hardware/software, digital curricula including <u>NIMAS</u> compliance, upgrades and other services including print media that will be needed to achieve the goals of this plan. Allow specific provisions for interoperability among components of such technologies to successfully achieve the goals of this plan. | | p. 19-22 |

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